WyreStorm
DIGITAL INTEGRITY

11 Input to 2 HDMI Output Switcher & Scaler
Part Number SW-1102

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

Wyrestorm AV Switcher Solutions

Instruction Manual

CE RoHS

Thank you for choosing this Wyrestorm product.
Please read these instructions carefully before installing to avoid complications later.

Contents

1 Introduction

2 Features

3 Safety Precautions

4 Packaging Contents

5 Panel Descriptions
- I. Front
- II. Rear

6 IR Remote

7 On-Screen Menu (OSM)

8 Input/Output Format

9 Connection & Operation

10 Typical Application

11 Specification

12 IR Extender

13 RS232

14 Maintenance

15 Product Service

16 Mail In Service

17 Warranty

18 Warranty Limits and Exclusions

19 INPUT/OUTPUT installation reference logs

1. Introduction

Retrofit installations can be complex and difficult to manage due to customer requirements for multiple devices of numerous digital or analog formats to be connected to HDMI outputs.

Wyrestorm Switchers and Scalers overcome that problem by providing multi-format plug and play solutions to get you connected quickly and easily.

The SW-1102 is a multi-function switcher and scaler that allows the conversion of up to 11 multi-format inputs to 2 HDMI outputs up to full HD 1080p video and HD audio.

Inputs supported include:

- 1 x VGA source
- 1 x S-Video source
- 2 x AV sources with stereo audio
- 2 x YPbPr sources with analog audio
- 4 x HDMI sources (with one supporting 5.1 multichannel digital audio)
- 1 x DVI-I source with analog audio and digital audio via optical*

The SW-1102 also allows upscaling and switching from standard definition/high definition sources to resolutions up to 720p or 1080p, with both outputs working simultaneously - some VESA formats can be bypassed by using VGA and DVI-I ports.

The unit also automatically amplifies and equalizes signals to ensure the optimum HD transmission over the length of the HDMI cable without any loss in quality of picture or audio. Whatever the project requirements, if multiple formats, devices and connectors are an issue, Wyrestorm Switcher and Scaler products can provide the perfect “get out of jail” solution.

For further information on this product and other Wyrestorm ranges, visit our website or download our latest product guide. **www.wyrestorm.com**

11 Input to 2 HDMI Output Switcher & Scaler
Part Number SW-1102

2. Features

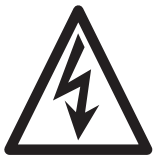
SW-1102

Inputs supported:
- 1 x VGA source
- 1 x S-Video source
- 2 x AV sources with stereo audio
- 2 x YPbPr sources with analog audio
- 4 x HDMI sources (with one supporting 5.1 multichannel digital audio)
- 1 x DVI-I source with analog audio and digital audio via optical*

**Should both analog and digital audio be connected, the digital audio has priority. Analog audio from the input is digitized and output to both the HDMI connection and the digital audio outs.*

- HDMI outputs also have separate analog audio outputs.
- Allows display to view any source at anytime
- Supports bypass function with VGA and DVI-I ports
- DVI-I supports both analog and digital formats with L/R and optical audio input
- Detached audio output by L/R and optical
- Delivers uncompressed digital video with zero signal loss
- Supports high definition resolutions 1080p, 1080i, 720p and standard video formats
- Scales to 720p or 1080p
- Can by-pass scaling and output as per source
- 10-bit triple-ADC for RGB/YPbPr
- Dual switching option: IR control with remote handset and manual front panel control
- Additional remote control with RS232 connectivity

3. Safety Precautions



WARNING
To reduce the risk of fire, electric shock or product damage:

1. Do not expose this apparatus to rain, moisture, sprays, drips or splashes and ensure that no objects containing liquids are placed on the apparatus, including cups, glasses and vases.

2. Do not place this unit in a confined space such as enclosed shelving, cabinets or bookshelves. Ensure the unit is adequately ventilated.

3. To prevent the risk of electric shock or fire hazard due to overheating, do not cover the unit or obstruct ventilation openings with material, newspaper, cardboard or anything that may restrict airflow into the unit.

4. Do not install near external heat sources such as radiators, heat registers, boilers or any device that produces heat such as amplifiers or computers and do not place near sources of naked flame.

5. Unplug apparatus from power supply during lightening storms or when unused for long periods of time.

6. Protect the power cable from being walked on, pinched or restricted in any way, especially at plug connections.

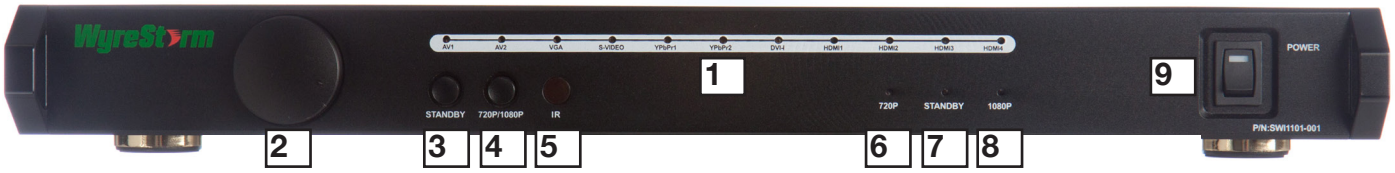
7. Only use attachments/accessories specified by the manufacturer.

8. Units contain non-servicable parts - Refer all servicing to qualified service personnel.

4. Package Contents

- Main unit. Wyrestorm SW-1102 Switcher & Scaler
- 5vDC mains power supply
- 1x remote control handset (Battery type: CR2025 3V).
- Product Manual - Printed and digital copies (digital copy also downloadable from website)
- IR Extension cable

5i. Panel Description Front



1 LED Source indication - 1-11 inputs - Lit when selected

2 Input selector – turn left or right to scroll through connected sources

3 Power standby

4 Output resolution selection – press to scroll between 720p, 1080p and Bypass (Bypass option used for VGA and DVI inputs)

5 IR window

6 720p selection indicator (LED lit when selected)*

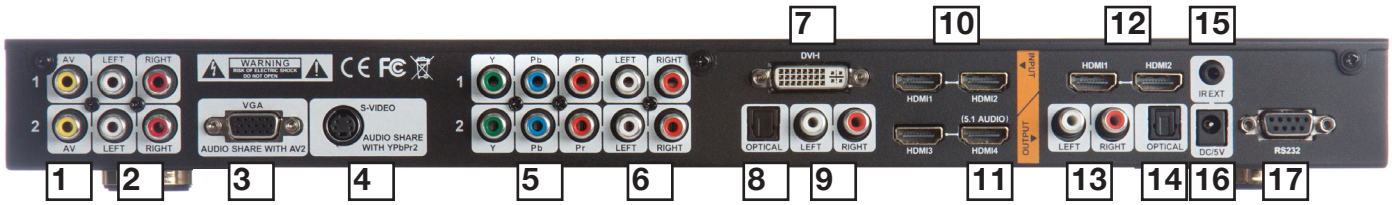
7 Power standby (LED lit when unit is in standby)

8 1080p selection indicator (LED lit when selected)*

9 Power switch

* Bypass selection indicated by neither LEDs lit

5ii. Panel Description Rear



1. Composite AV inputs 1 & 2
2. Composite AV 1 & 2 stereo audio input (L/R)
3. VGA input
4. S-Video input
5. Component YPbPr inputs 1 & 2
6. Component YPbPr 1 & 2 stereo audio input (L/R)
7. DVI-I input
8. Optical audio input
9. Stereo audio (L/R)
10. HDMI Inputs 1-4
11. HDMI input including 5.1 audio support
12. HDMI Output 1 &2
13. Analog audio output (L/R)
14. Optical audio output
15. IR Extension
16. 5vDC Power Input
17. RS232 Port

6. IR Remote

1 STANDBY: press to enter and exit standby mode.

2 INFO: view input and output messages from the SW-1102

3 INPUT SOURCE: press for direct selection of specific input source.

4 UP/DOWN: Scroll numerically through inputs.

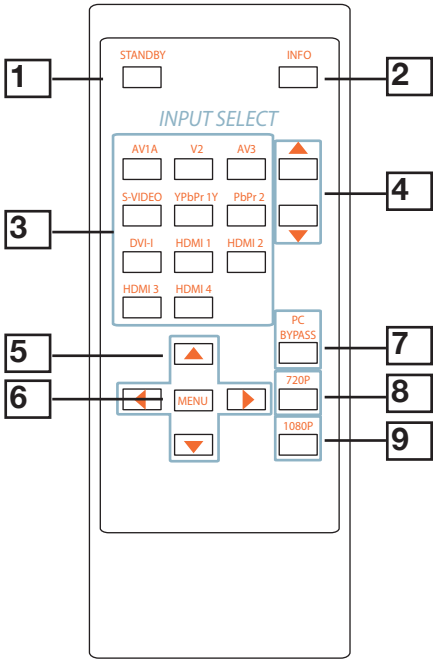
5 UP/DOWN/LEFT/RIGHT: UP/DOWN to move highlighter bar to desired parameter in On-Screen Menu (OSM) menu. Press LEFT/RIGHT to increase/decrease setting value of selected parameters.

6 MENU: Activates OSM (on-screen menu)

7 PC BYPASS: Enters bypass mode (for VGA and DVI inputs)

8 720p: Select to directly output 720p resolution.

9 1080p: Select to directly output 1080p resolution.



7. On-Screen Menu

PICTURE	Contrast	0~100 of contrast level
	Brightness	0~100 of bright level
	Saturation	0~100 of saturation level
	Sharpness	0~100 of sharpness level
	Hue	0~100 of sharpness level
	Picture mode	Standard/ dynamic/ soft /personal
	Scale	Full/ overscan/ underscan/ letterbox/ panscan
	NR	High/ mid /low/ auto/ off
	Reset	Reset the above parameters to default factory settings.
PC	Contrast	0~100 contrast level
	Brightness	0~100 of bright level
	H-position	0~100 of H position level
	V-position	0~100 of V position level
	H-size	0~20 of H size level
	V-size	0~20 of V size level
	Reset	Reset the above parameters to default factory settings.
OSD	H-position	0~100 of H position level
	V-position	0~100 of V position level
	Duration	5s/ 15s/ 30s/ 60s
	Half-tone	0~8 of half-tone level
	Reset	Reset the above parameters to the default factory settings

8. Input/Output Format

INPUT	
AV/SV	PAL, NTSC
YPBPR/HDMI	480i, 480p, 576i, 576p, 720p@[50/60], 1080i@[50/60], 1080p@[50/60]
VGA/DVI(RGBHV)	800x600@60, 1024x768@60, 1152x864@60, 1280 x768@60, 1280 x960@60, 1280x1024@60, 1440 x900@60, 1400 x1050@60, 1600 x1200@60,
VESA-BYPASS	800x600@60, 1024x768@60, 1280x1024@60, 1280 x960@60, 1440 x900@60, 1600 x1200@60
OUTPUT	
AV/SV/YPBPR/HDMI/VGA/DVI	720p@[50/60] 1080p@[50/60]
VESA-BYPASS	800x600@60,1024x768@60,1280x1024@60, 1280 x960@60,1440 x900@60,1600 x1200@60

9. Connection & Operation

1 Connect your multi-format digital or analog AV input sources to the SW-1102 Switcher and Scaler, ensuring device format, cables and connectors are supported by the unit and suitable for the chosen port.

2 Using good quality HDMI cables no longer than 15m/49ft in length, connect the SW-1102 to HDMI output devices (such as HD-LCD display or HD-DLP).

3 Power on sources to be used – we recommend keeping unused inputs switched off so as not to interfere with normal display.

4 Connect the SW-1102 to the power supply included and choose your display output.

5 Select sources by using the input selector (turning left or right) on the front panel or the remote handset.

NOTE **VGA and AV2 share the same L/R audio input, S-video and YPBPR2 share the same L/R audio.**

Attention **SW-1102 memory - when restarting the unit, input/output selection will resume as per previous selection.**

Under bypass mode, when switching from VGA or DVI-I to other inputs, the output will be set to 1080p.

Output will be set to 1080p when powered from Bypass mode.

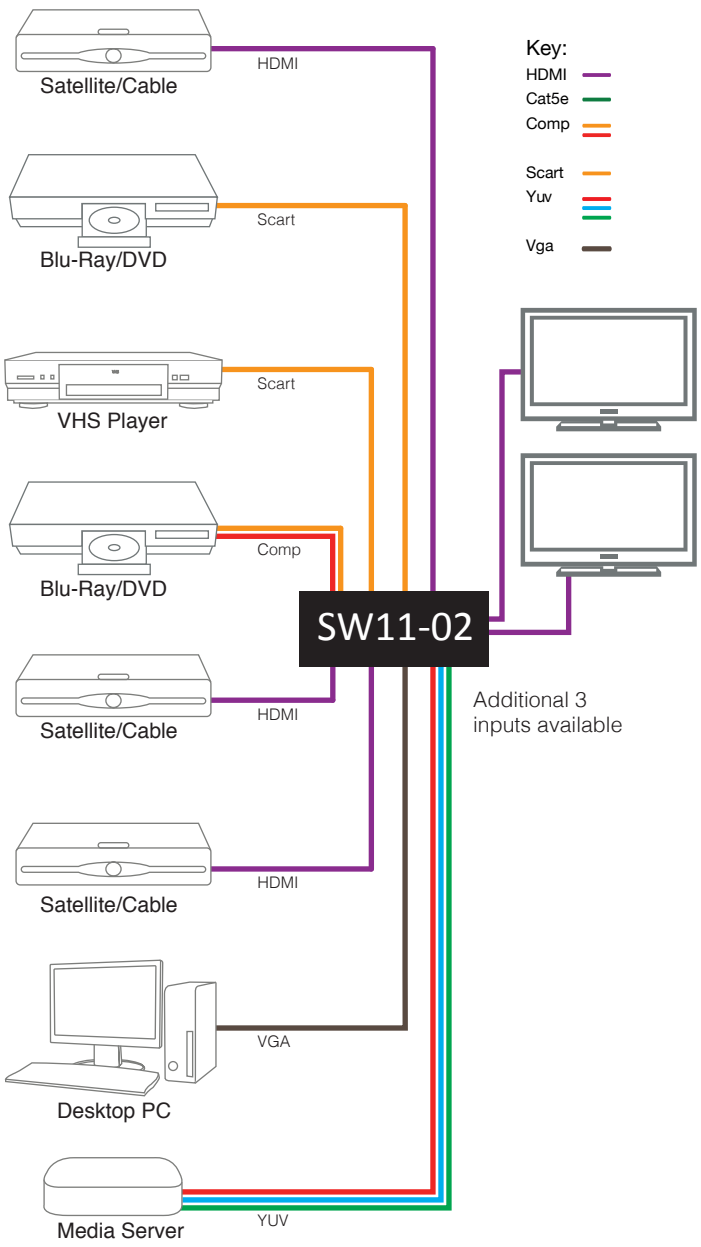
Bypass function is for VGA and DVI-I input s only.

Other than VESA, output will be automatically set to 1080p.

Attention **Insert / Extract cables gently.**

NOTE **SW-1102 accepts AV, SV, VGA, YPBPR, DVI-I and HDMI inputs.**

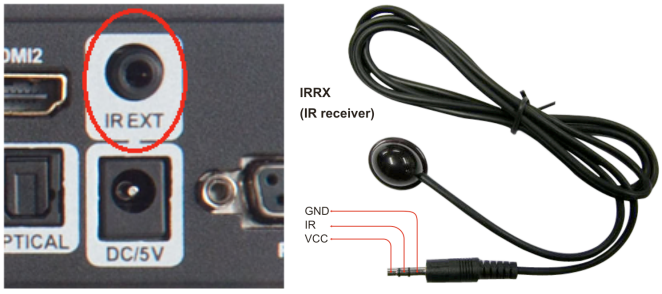
10. Typical Application



11. Specification

Operating Temperature Range	-5 to +35°C (-41 to +95 °F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Output Video	HDMI1.2
Maximum Transmission Distance	<15m/49ft (if necessary, HDMI transmission can be lengthened using a Wyrestorm HDMI extender)
Power Consumption	15wtts (Max.)
Power Supply	5VDC
Dimensions	430mmW×48mmH×200mmD/16.9"W ×1.9"H×7.9"D
Mass (Main unit)	2.4kgs/5.3lb

12. IR Extender Control



Users can use the included IR receiver cable to change the IR receiver position should IR signals become obstructed by the location of the unit (such as positioned in a rack or cupboard).

If controlling the SW-1102 through the 35mm (1/8") input jack on the rear panel, connect the IR cable directly to the IR EXT port.

13. RS232 Remote Control

Com port setting:

Baud rate	9600 bps
Data bits	8 bits
Parity	None
Stop bits	1 bit
Flow control	None

14. Maintenance

Clean this unit with a soft, dry cloth only. Never use alcohol, paint thinner or other harsh chemicals.

15. Product Services

Provided Service:

1. Damage requiring service: This unit should be serviced by a qualified service personnel if:

- The DC power supply or AC adaptor has been damaged.
- Objects or liquid have gotten into the unit.
- The unit has been exposed to rain.
- The unit does not operate normally or exhibits a marked change in performance.
- The unit has been dropped or the cabinet damaged.

2. Servicing Personnel: Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorised servicing personnel.

3. Replacement Parts: When parts need replacing, ensure parts approved by the manufacturer are used – either those specified by the manufacturer or parts possessing the same characteristics as the original parts. Be aware – unauthorised substitutes may result in fire, electric shock, or other hazards and will invalidate your warranty.

4. Safety Check: After repairs or service, ask the service personnel to perform safety checks

16. Mail-in-service

When shipping the unit, carefully pack and send it prepaid, with adequate insurance and preferably in the original packaging. Please include a document or letter detailing the reason for return and include a daytime telephone number and/or email address where you can be contacted.

If repair is required during the limited warranty period, the purchaser will be required to provide a sales receipt or other proof of purchase, indicating date and location of purchase as well as the price paid for the product. The customer will be charged for the repair of any unit received unless such information is provided.

17. Warranty

Should you feel your product does not function adequately due to defects in materials or workmanship, we (referred to as “the warrantor”) will, for the length of the period indicated below (starting from the original date of purchase) either:
a) Repair the product with new or refurbished parts.
or
b) Replace it with a new or refurbished product.

Limited warranty period:

All Wyrestorm products are covered by a 2 or 3 year PARTS and LABOUR warranty. During this period there will be no charge for unit repair, replacement of unit components or replacement of product if necessary.

Please check the specific warranty period that applies to your purchased product with your Wyrestorm dealer.

The decision to repair or replace will be made by the warrantor. The purchaser must mail-in the product during the warranty period. This limited warranty only covers the product purchased as new and is extended to the original purchaser only. It is non-transferable to subsequent owners, even during the warranty period.

A purchase receipt or other proof of original purchase date is required for the limited warranty service.

17. Warranty Limits and Exclusions

1. This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship and DOES NOT COVER normal wear and tear or cosmetic damage.

The limited warranty also DOES NOT COVER damage that occurs in shipment or failures caused by products not supplied by the warrantor, failures resulting from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, incorrect installation, set-up adjustment, implementation of/to consumer controls, improper maintenance, power line surge, lightening damage, modification, service by anyone other than a manufacturer-approved service centre or factory-authorised personnel, or damage attributable to acts of God.

2. There are no express warranties except as listed under "limited warranty coverage." The warrantor is not liable for incidental or consequential damage resulting from the use of this product or arising out of any breach of this warranty.

For example: damages for lost time, the cost of having a person/persons remove or re-install previously installed equipment, travel to and from service location, loss of or damage to media, images, data or other recorded/stored content. The items listed here are not exclusive, but are for illustration only.

Parts and service not covered by this limited warranty are not the responsibility of the warrantor and should be considered the responsibility of the individual.

18. INPUT/OUTPUT Installation Reference Log

INPUT				
Input number on SW-1102	Source Location	Source Details	Source format, resolution & audio settings	Cable Number
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

OUTPUT				
Output number on SW-1102	Output Location	Display Details	Display Resolution & Audio Settings	Cable Number
1				
2				

www.wyrestorm.com

WyreStorm Offices

US Office: 6991 Appling Farms Parkway, Suite 104, Memphis, TN 38133

Tel: + 901 384 3575 Fax: + 901 384 3574

Unit 22, Ergo Business Park, Swindon, Wiltshire, SN3 3JW UK

Tel: +44 (0) 1793 230 343 Fax: +44 (0) 1793 230 583

WyreStorm Technical Support

US: +86 6677 0053

UK:- +44 (0) 1793 238 338

Email: support@wyrestorm.com

We reserve the right to change specification or product dimensions at any time.